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DEFENSE SUPPORT PROGRAM

PROGRAM BASELINE

With the objective of eliminating cost growth, we, the undersigned, approve this document to baseline the Defense Support Program. Our intent is that the program be managed within the programmatic and financial constraints identified herein.

This baseline document is a summary and does not specify total program content in detail. It does, however, contain key parameters, concepts, numbers, and dates which are the basis for an agreement between the implementing, using, supporting, and other participating commands. Within this framework, the Defense Support Program shall be managed to provide a satisfactory capability.

Clyde H. Magill 16 June 83
Date
Deputy for Defense Support Systems

James S. McIntyre 11 July 83
Date
HQ Space Division

Mark A. ...
Date
Air Force Systems Command

Carl N. Beer 3 Aug 83
Date
Space Command

Steve A. ...
Date
Air Force Logistics Command

Thomas J. Heiken
Date
Air Training Command

Richard ...
Date
Air Force Operational Test & Evaluation
Center

CLASSIFIED BY HQ SAC, DSP SCG, 15 Jun 82
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DEFENSE SUPPORT PROGRAM

BASELINE CHANGE LOG

Program Direction: R-S 4047(22)/12431F, 30 July 1982

Program Baselined: June 1983

Total Program Estimate: 5,044.8 million

<u>Change Number</u>	<u>Date Implemented by PMD</u>	<u>Description of Change</u>	<u>Total Program Dollar Delta (TY \$ in Millions)</u>
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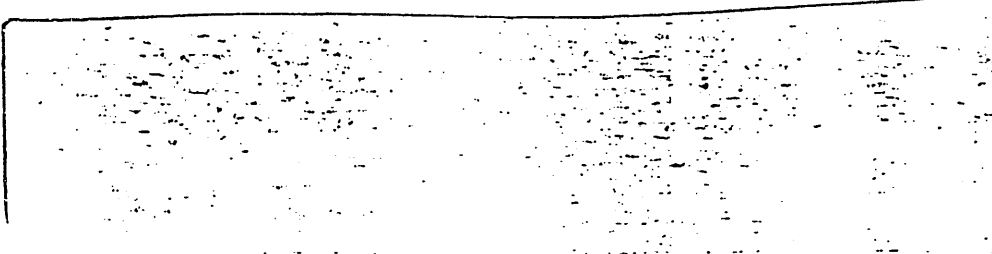
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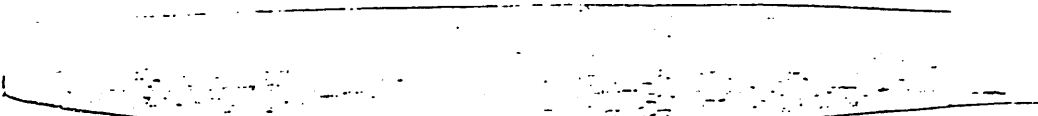
(U) Part I - REQUIREMENTS

(U) Reference Documents:

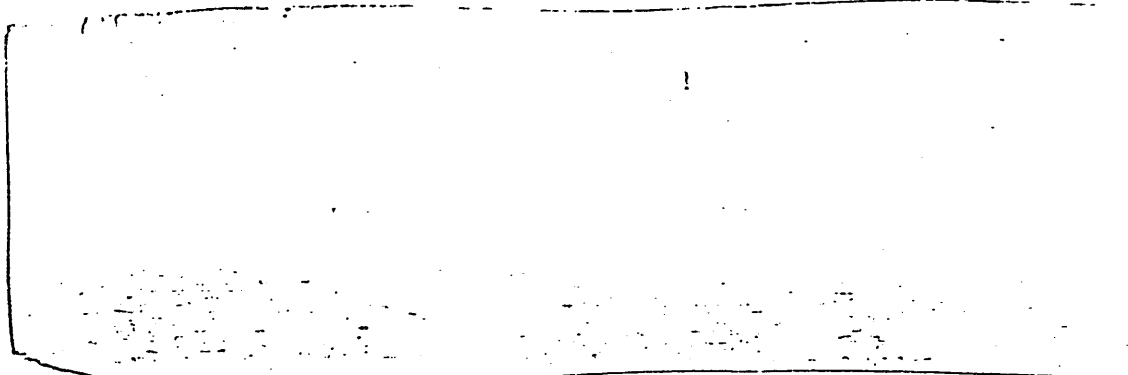
- (U) Update sheet for the Defense Support Program Development Concept Paper No. 58, 1 September 1972.



- (U) System Operational Concept for Mobile Ground Terminals (MGT) Defense Support Program, August 1981.



(U) Program Objectives:



(U) Part II - PROGRAM CONTENT (FUNDED)

(U) System Definition:

- (U) - Space segment configuration: Reference PMD R-S 4047(22)/12431F, 30 July 1982, page 8, 3.b.(2) and page 9, para 3.b.(3)
- (U) - Anti-Jam Commanding Capability
- (U) - Ground segment configuration:
 - (U) -- SPS to provide operational back-up (pre-crosslink)
 - (U) -- MGSs to enhance data survivability
 - (U) -- LPS/SPS/MGS with new processing hardware and software compatible with SED and existing operational satellites (performance equivalent to pre-SED)
 - (U) -- Ground Communication Network (GCN) upgrade
 - (U) -- DSM with Mission A and B capability (no Link 2)

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- (U) -- Anti-jam commanding uplink equipment and software for LPS.
 - (U) -- Spacecraft simulator compatible with DSP-1 and existing satellites.
 - (U) -- DSP-1 LPS compatibility: DSP-1 software (Mission A, Mission B, command and status; backward compatible with SED and pre-SED); anti-jam commanding system, full parallel 2nd color processing, autonomous ephemeris (no dependence on SCF for trans- and post-attack ephemeris); DSP-1 hardware (SRS, DRC, TOR; backward compatible with SED and pre-SED).
 - (U) -- MGS: DSP-1 software (Mission A, Mission B; backward compatible with SED and pre-SED); 2nd color software (non-simultaneous); MGS hardware (mission downlink and MDM).
 - (U) -- MGS command and limited status capability to be retrofitted for 1989 operational capability (assuming MDM capability).
 - (U) -- MGS Administrative Communications System (ACS) - VHF capability.
- (U) - Launch vehicle configuration
- ST-12 for Satellites 14 and subsequent
 - (U) -- TS40, TOS or TS40 Transtage for Satellites 12, 5R and 6R

Operations Concept:

-
- (U) - Fixed and mobile ground systems
 - (U) -- Large Processing Station (LPS)
 - (U) -- Simplified Processing Station (SPS)
 - (U) -- Mobile Ground System (MGS)
 - (U) -- Ground Communications Network (GCN)
 - (U) -- Multipurpose facility (MPF)
 - (U) -- Operational Support Module (OSM)
 - (U) - Primary Missions
-

Performance Parameters:

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Maintenance Concept:

- Organizational and intermediate maintenance is responsibility of operating command
 - optimum on-site repair using remove, replace and repair concept (to extent possible)
- Off-site depot level maintenance and contract support is responsibility of AFLC (LPS, MGT) and Space Command (SPS).
- Off-site and on-site depot level maintenance for COMSEC equipment is responsibility of AFCSC

Test and Evaluation:

- DT&E
 - Completed on basic system; SPO designated responsible test organization, will continue upgrades
 - Performed by contractors for system upgrades
- OT&E
 - SED (including ground segment) managed by Space Command with AFOTEC monitoring.
 - LPS upgrade managed by Space Command with AFOTEC monitoring, completed mid-FY 83
 - GCN managed by Space Command with AFOTEC monitoring
 - Peripheral Upgrade (Pre-Sat 14) managed by Space Command, AFOTEC monitored.
 - Ground Station Upgrades for DSP-1 (Pre-Sat 14) managed by Space Command, AFOTEC monitored.
 - DSP-1 System, including ground control segments AFOTEC managed, monitored by Space Command.
 - MGS managed by AFOTEC.
 - IOT&E requirements are identified in the latest revisions of AFOTEC Test Program Outlines (TPO) AFOTEC-0168 and AFOTEC-0169 (currently dated 18 Feb 83).

System Certification:

- The System Integration Office will certify all system changes and improvements for architectural compatibility and technical integrity to include end-to-end testing prior to operational acceptance."

Training:

- Technical data, support equipment, spares and unique facilities for training provided by Program Office
- Training equipment, ECP's - no requirement currently identified
- Funding for Type 1 training is needed but not included in baseline cost.

Acquisition Strategy:

- Contract types
 - Spacecraft 14-17 production: FPIF 75/25 118% ceiling
 - Sensor 14-17 production: FPIF 70/30 120% ceiling
 - MGT development and production: FPIF 75/25 130% ceiling
 - LPS upgrade, PUP, and Ground Station 14; FFP/FPIF
 - SPS software/hardware upgrades: CPIF
 - MGT (DSP-1): TBD
 - GCN: FPIF (competitive)

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Schedule:

- Satellite deliveries:
 - 12 - Oct 82 (Conditional DD250)
 - 5R - Mar 83 (Conditional DD250)
 - 6R - Nov 84
 - 14 - Mar 86 (tentative, pending negotiations)
 - 15 - Mar 86
 - 16 - Sep 86
 - 17 - Apr 87
 - 18 - TBD
 - 19 - TBD
- MGT deliveries
 - Two units in 1984
 - Four units in 1985
- MCT deliveries - TBD
- MOB turnover - 1985
- LPS upgrade
 - Main processor installation in FY 83
 - Peripheral replacement and Ground Station 14 upgrades completed in FY 86.

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BASELINE DOCUMENT FORMAT - PART III

PART III - APPROVED FUNDING - FY 84 PRES BUDG

(\$ in Millions, Then Year)									
	Prior Year Total	FY83 Current Year	FY84 Budget Year	FY85 BY+1	FY86 BY+2	FY87 BY+3	FY88 BY+4	To Complete	Total
RDT&E	827.2	120.3	48.7	53.9	36.0	42.0	44.6	37.2	1209.9
PROCUREMENT	(4)								(4)
3010	(9)	(2)	(2)			(1)	(1)		(15)
3020	1143.5	404.9	356.9	35.8	223.1	374.8	289.7	128.4	2057.1
3080	408.9	87.2	28.4	57.7	82.5	51.3	30.5	14.0	760.5
QUANTITIES	(3)	(3)							(6)
INITIAL SPARES									
MILCON	17.3								17.3
TOTAL	2396.9	612.4	434.0	147.4	341.6	468.1	464.8	179.6	5044.8

(\$ in Millions, Base Year)									
	Prior Year Total	Current Year	Budget Year	BY+1	BY+2	BY+3	BY+4	To Complete	Total
3600	771.2	77.2	29.8	31.4	20.1	22.4	22.8	17.4	992.3
3020	985.1	235.7	196.4	18.6	109.4	173.5	170.5	50.1	1939.3
3080	341.1	52.5	16.5	15.7	43.7	26.0	14.8	6.2	516.5
MILCON	17.3								17.3
TOTAL	2114.7	365.4	242.7	65.7	173.2	221.9	208.1	73.7	3465.4

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3465.4

NOTE: (Identify Date of OSD Inflation Indices Used).

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PART IV PROGRAM CONTENT (UNFUNDED)

- DSP LASERCOM PRODUCTION. Present funding allows for production of only two units. Remaining two units will be retrofitted during period of opportunity.

	<u>FY 86/3020</u>	<u>TOTAL</u>
Required Funding	\$50	\$50M

- Mobile Communications Terminal (MCT). Present funding allows for production of units which are insufficient to meet user deployment requirements.

	<u>FY 86/3080</u>	<u>TOTAL</u>
Required Funding	\$30M	\$30M

- RF Enhancement (HBO)

Required Funding TBD

The Defense Support Program does not presently contain nor have funded the following effort. The effort is considered necessary to completely satisfy the validated need.

Space Segment

- MDM compatibility with user aircraft (open item)
- STS Ku-band transmitter impact on DSP design (open item)

Ground Segment

- SPS
 - SED/ATH Mission Computer Program
 - Masking Effects Verification (MEV)
 - DSP 1 Upgrades
 - Backup attitude
- ADCCP protocol for existing DSP sources.
- MOB/IMF Upgrade (3010; PASS, UHF/LOW, WWV antennae)
- MACS Upgrade (SCO requirements)
- MGT Software Development/Maintenance Facility
- MGT Global Summary Message ICD Change
- MGT Second Display
- Upgrade of Satellite Readout Station (SRS) for obsolescence
- Backup Command System (BUCS)

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